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Date: January 29, 2008/Jessica Sexton/

Jessica Sexton

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re patent application of:

Appellant(s): D. Maxwell Chickering *et al.*

Examiner: Akiba K. Robinson Boyce

Serial No: 09/681,050

Art Unit: 3639

Filing Date: December 8, 2000

Title: DECISION THEORETIC APPROACH TO TARGETED SOLICITATION BY  
MAXIMIZING EXPECTED PROFIT INCREASES

**Mail Stop Appeal Brief-Patents**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, VA 22313-1450**

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**REPLY BRIEF**

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Dear Sir:

Applicants' representative submits this Reply Brief in response to the Examiner's Answer dated December 27, 2007. In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP282US].

**REMARKS**

Claims 1-11 and 13-30 are currently pending and are presently under consideration. Favorable reconsideration of the subject patent application is respectfully requested in view of the comments herein. In particular, the following comments address deficiencies contended in the Examiner's Answer to applicants' Appeal Brief.

**I. Regarding the Rejection of Claims 1, 8-10 and 28 Under 35 U.S.C. §102(e)**

The Examiner incorrectly maintains the rejection of claims 1, 8-10 and 28 under 35 U.S.C. §102(e) as being anticipated by Bibelnieks *et al.* (U.S. 2003/0208402). It is respectfully submitted that this rejection should be reversed for at least the following reasons. Bibelnieks *et al.* does not teach or suggest each and every limitation of appellants' claimed invention.

A single prior art reference anticipates a patent claim only if it expressly or inherently describes ***each and every limitation*** set forth in the patent claim. *Trintec Industries, Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 63 USPQ2d 1597 (Fed. Cir. 2002); *See Verdegaa Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). ***The identical invention must be shown in as complete detail as is contained in the ... claim.*** *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). (emphasis added).

The subject invention relates to methods and systems for identifying a sub-population of a population to solicit and a sub-population of the population not to solicit that will maximize profits for an advertiser performing solicitation. For instance, appellants' claimed invention can take a sample of a population of potential purchasers, divide the sample into a solicitation group and a non-solicitation group, and solicit the solicitation group. Tracking of purchases and non-purchases by members of each group allows for a model to be constructed that can be used against the entire population to identify a sub-population to solicit and a sub-population not to solicit that will maximize profits. Appellants' claimed invention minimizes solicitation of members who will not make a purchase, who are already planning on buying, and/or who planned on buying but will not buy if solicited, thereby reducing cost of solicitation. The method also increases solicitation to a subset of members who will buy if solicited, thereby maximizing purchases. In particular, as recited in independent claims 1 and 28, appellants' claimed invention

***sets a purchase variable to a first value for each of the plurality of members of the solicitation and the non-solicitation sub-population that made a purchase and to a second value for each of the plurality of members of the solicitation and the non-solicitation sub-populations that did not make the purchase.***

Bibelnieks *et al.* does not teach or suggest the aforementioned novel aspects of appellants' claimed invention. Rather, Bibelnieks *et al.* discloses a system that factors in the impact of multiple promotions to one or more classes of customers over a specified time. The cited reference attempts to improve direct marketing by determining the cannibalization impact one promotion has on another promotion for a given customer or customer class during this time. The system only tracks purchase information for customers who were sent solicitations. The system is silent regarding setting a purchase variable for non-solicited members of a sub population. Appellants' claimed invention tracks solicitation and purchase information for solicited and non-solicited members of a subpopulation, so that this information can be applied to the larger population in making solicitation decisions. The Advisory Action asserts that P0 represents a non-mailed promotion. Contrary to assertions in the Advisory Action, P0 represents a first promotion and P+1 represents a second promotion. The cited paragraph [0062] of the reference clearly states that both P0 and P+1 are promotions that are mailed to customers and the set of customer S represents customers that have received both promotions. The cited reference only tracks sales for individuals that were mailed promotions. It does not track purchases for individuals that were not sent promotions. The cannibalization matrix merely indicates the sales from mailed promotion P0 that were made by individuals that also received promotion P+1. The sales information is tracked only for individuals who received the promotions. It does not set any purchase variable for individuals who have not received a promotion. In the Examiner's Answer dated December 27, 2007, Examiner asserts that the individuals that received promotion P+1 are tracked for purchases and that this implies that they did not receive P0 and thus a purchase variable is set for P0. On the contrary, the individuals in P+1 are not tracked for purchases until they have been solicited by promotion P+1 unless they were also solicited by P0. As such, when promotion P0 is sent, the non-solicited individuals are not tracked for purchases. They are only tracked once they have been solicited at either P0 or P+1. Furthermore, with respect to the test and control group which are mutually disjoint, the control group is tracked once solicited with I(P0). The test group has been solicited with both I(P0) and J(P+1), which contrary to assertions

by the Examiner, indicates that they are being tracked for purchases based upon solicitation. Bibelnieks *et al.* does not teach or suggest setting any purchase variable for a non-solicited population. The subject claims disclose tracking purchases for non-solicited sub-populations which provides a benefit as discussed above in determining which customers to solicit. Therefore, Bibelnieks *et al.* does not teach or suggest setting a purchase variable to a first value for each of the plurality of members of the solicitation and the non-solicitation sub-population that made a purchase and to a second value for each of the plurality of members of the solicitation and the non-solicitation sub-populations that did not make the purchase as in appellants' claimed invention.

In view of at least the foregoing, appellants' representative respectfully submits that Bibelnieks *et al.* fails to teach or suggest all limitations of appellants' invention as recited in independent claims 1 and 28 (and claims 8-10 that depends there from), and thus fails to anticipate the claimed invention. Accordingly, reversal of this rejection is respectfully requested.

## **II. Regarding the Rejection of Claims 2-7, 11, 13-27, 29, 30 Under 35 U.S.C. §103(a)**

The Examiner incorrectly maintains the rejection of claims 2-7, 11, 13-27, 29, 30 under U.S.C. §103(a) as being unpatentable over Bibelnieks *et al.* (U.S. 2003/0208402) as applied to claim 1 above, and further in view of Kohavi (U.S. 6,182,058). It is respectfully submitted that this rejection should be reversed for at least the following reasons. Bibelnieks *et al.* in view of Kohavi does not teach or suggest each and every limitation of appellants' claimed invention.

To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §706.02(j). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on appellant's disclosure. See *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Independent claims 11 and 24 (similarly to independent claims 1 and 28) recite ***setting the purchase variable to the first value for each of the plurality of members of the solicitation and the non-solicitation groups that made a purchase and to the second value for each of the plurality of members of the solicitation and the non-solicitation groups that did not make the purchase;... applying the decision tree against the population to identify the sub-population to solicit.*** As discussed *supra* with respect to independent claims 1 and 28, Bibelnieks *et al.* fails to teach or suggest these novel features of the subject claims. Furthermore, Kohavi fails to make up for the deficiencies of Bibelnieks *et al.* with respect to these claimed features. Rather, Kohavi discloses a hybrid classifier, called the NB-Tree classifier, for classifying a set of records. In an example, Kohavi teaches a marketing campaign where responses are tracked to determine who is likely to respond. However, Kohavi fails to teach a solicitation variable that is set to the first value for each of a plurality of members of the solicitation group and to the second value for each of a plurality of members of the non-solicitation group. Kohavi does not indicate that unsolicited members are tracked and therefore would not need to set a solicitation variable. Furthermore, Kohavi also fails to teach a purchase variable that is set with a first value for purchase and a second value for non-purchase. A likeliness to respond is not analogous to a purchase. A recipient of the marketing campaign may respond, such as to request more information or look at a product, without ever making a purchase. Moreover, Kohavi fails to mention purchase or buy anywhere in the patent.

Therefore, Bibelnieks *et al.* and Kohavi do not teach or suggest setting the purchase variable to the first value for each of the plurality of members of the solicitation and the non-solicitation groups that made a purchase and to the second value for each of the plurality of members of the solicitation and the non-solicitation groups that did not make the purchase;...and applying the decision tree against the population to identify the sub-population to solicit to maximize the expected increase in profits as in appellants' claimed invention.

Claims 2-7 and 29-30 depend from independent claims 1 and 28 respectively. As discussed above with respect to the similar limitations of independent claims 11 and 24, Kohavi fails to cure the above noted deficiencies of Bibelnieks *et al.* regarding independent claims 1 and 28.

In view of at least the above, it is respectfully submitted that Bibelnieks *et al.* and Kohavi, alone or in combination, fail to teach or suggest all aspects of appellants' invention as recited in independent claims 1, 11, 24, and 29 (and claims 2-7, 13-23, and 25-27 that depend there from), and thus fails to make obvious the subject claimed invention. As such, reversal of this rejection is respectfully requested.

### **III. Conclusion**

The subject application is believed to be in condition for allowance in view of the above comments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP282US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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